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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/097,787	06/15/1998	DEBORAH W. BROWN	112539	3328

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EXAMINER

HAN, QI

ART UNIT	PAPER NUMBER
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2626

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12/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/097,787	Applicant(s) BROWN ET AL.	
	Examiner QI HAN	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 12-15 and 28-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12-15 and 28-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2626

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. This communication is responsive to the applicant's amendment dated 09/02/2009. The applicant(s) amended claims 1,12 and 32 (see the amendment: pages 2-5).

The examiner withdrew the previous claim rejection under 35 USC 112 1st, because the applicant provided persuasive evidence and argument to support the previous amended claim(s).

Response to Arguments

Applicant's arguments filed on 09/02/2009 with respect to the claim rejection under 35 USC 102 and/or 103, have been fully considered but are moot in view of the new ground(s) of rejection, since the amended claims introduce new issue and/or change the scope of the claims. Thus, response to the arguments is directed to the corresponding claim rejection with necessitated new ground(s) (see below).

In addition, it is noted that the applicant's referenced paragraphs 19 and 23 (see Remarks: page 9, first paragraph) cannot be found in the original specification filed on 09/07/2006.

Claim Rejections - 35 USC § 103

3. Claims 1-4, 12-15 and 28-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over GALLER et al (US 5,991,720) hereinafter referenced as GALLER in view of THRIFT et al. (US 6,188,985) hereinafter referenced THRIFT.

As per **claim 1**, GALLER discloses ‘speech recognition system employing multiple grammar networks’(title), comprising:

a) generating at least one selection identifier from user speech input (col. 2, lines 45-48, ‘a plurality of recognition candidates (selection identifiers) are generated’, ‘N-best candidates’; col. 5, lines 64-67, ‘spelled name’, ‘input (user speech input) through a callers telephone handset 10’; also see col. 7, line 10 to col. 8, line 10);

b) comparing the at least one selection identifier with the set of reference identifiers to determining which section identifiers match data elements in the set of reference identifiers (col. 2, lines 53-67, ‘matching (or comparing) the candidates (selection identifier) to a dictionary (necessarily including entries and associated data, which read on claimed reference identifiers and data elements) of spelled names’ and using ‘different grammar network(s) (read on data element)’; col. 7, line 33 to col. 8, line 10, ‘Viterbi decoder’, ‘HMM model’ and associated ‘probabilities’ which can also be read on data elements; matching ‘name dictionary’ for comparing the hypotheses’);

c) deriving a dynamic grammar from data elements that are associated with the reference identifier that match any one of the at least one selection identifiers (col. 3, lines 22-42, ‘to build (derive) a dynamic grammar that is built from the N-best and M-best name candidates (data elements associated reference identifiers that match the selection identifier(s))’; col. 7, line 33 to

Art Unit: 2626

col. 8, line 32, 'building a dynamic grammar' by using 'DP alignment module' and 'the hypotheses' that are based on matching HMM models and the associated 'probabilities' (data elements); col. 5, lines 37-44, 'using an N-best strategy for real-time recognition the DSP-implemented speech recognizer selects the most probable candidate' that implies more than one reference identifier matched and processing dynamic grammar; Fig. 5 and col. 8, lines 3-30, 'passes the N-best and M-best hypotheses to module 42 for building a dynamic program'; also see col. 6, lines 10-17).

GALLER does not expressly disclose that "wherein the user speech input comprises at least one non-letter, non-number typographical character". However, the features are well known in the art as evidenced by THRIFT who discloses 'wireless voice-activated device for control of a processor-based host system' (title), comprising 'performs...voice (speech) recognition process and delivers speech data...', 'convert the audio input to a text translation' and creating various grammars (col. 3, lines 1-45) for 'speokable commands', 'speokable hotlist', and 'speokable links' including 'the full phrase as well as variations' such as 'Dian in N period Y period (read on non-letter, non-number typographical character)' (col. 5, lines 9-52), and disclosing known techniques regarding 'speaker-independent vocabulary and grammar in speech recognition' in US 5774,628, incorporated by reference, inherently including using 'vocabulary and online dictionary' (col. 5, lines 53-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of using speech recognition dictionary and dynamic grammar disclosed by GALLER with the teachings of providing voice (speech) recognition for speokable links including non-letter, non-number typographical character (such as period) with related vocabulary and dictionary as taught by

Art Unit: 2626

THRIFT, for the purpose (motivation) of making information on the Web more accessible and useful (THRIFT: col. 2, 115-19).

As per **claim 2** (depending on claim 1), GALLER (in view of THRIFT) further discloses the step a) comprising:

- i) receiving an input identifier;(col. 5, line 64 to col. 6, line 8, input ‘Hanson’);and
- ii) deriving the at least one selection identifier in accordance with the input identifier (col. 7, lines 10-col. 8, line 10, ‘N-best and M-best hypotheses’).

As per **claim 3** (depending on claim 2), GALLER (in view of THRIFT) further discloses that the at least one selection identifier is derived from the input identifier in accordance with a Hidden Markov Model algorithm (Fig. 5 and col. 7, lines 10-col. 8, line 10, ‘Hidden Markov Models Recognition 26a, and 26b’).

As per **claim 4** (depending on claim 2), GALLER (in view of THRIFT) further discloses that wherein the plurality of selection identifiers is derived from the input identifier in accordance with one of a confusion matrix and a plurality of confusion sets (col. 9, lines 15-26, ‘confusable words’, ‘the tied letters are (m, n), (i, r), (p, t) and (b, d)’, ‘the “E-set” letters’, which reads on the claimed “**one of ...and a plurality of confusion sets**”; col. 5, lines 65-66, ‘to recognize continuously spelled names (input identifier) ...as input’).

As per **claims 28-29** (depending on claim 1), the rejection is based on the same reason described for claim 1, because it also reads on the limitation of claim 28-29.

As per **claims 12-15 and 30-31**, they recite an apparatus. The rejection is based on the same reason described for claims 1-4 and 28-29, because the claims recite the same or similar limitations as claims 12-15 and 30-31 respectively.

Art Unit: 2626

As per **claims 32-35 and 36-37**, they recite a computer-readable medium. The rejection is based on the same reason described for claims 1-4 and 28-29, because the claims recite the same or similar limitations as claims 32-35 and 36-37 respectively.

4. Claims 38-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over GALLER in view of THRIFT as applied to claims 1, 12 and 32, and further in view of KANEVSKY et al. (IDS: US 5, 897,616) hereinafter referenced KANEVSKY.

As per **claims 38-39** (depending on claim 1), GALLER in view of THRIFT does not expressly disclose that “the dynamic grammar is derived for use in processing **second** user input received after receiving the user speech input” (for claim 38) and “after deriving the dynamic grammar, presenting as prompt to the user to obtain the second user input; and processing the second user input with the dynamic grammar to identify a desired selection identifier from the at least one selection identifier” (for claim 39)”. However, the features are well known in the art as evidenced by KANEVSKY who discloses ‘apparatus and methods for speaker verification/identification/classification employing non-acoustic and/or acoustic models and databases’ (title), comprising known ‘services/facilities’ to obtain ‘customer’s knowledge of information’ by ‘customer interfacing’ (col. 1, lines 33-40), using automatic speech recognition and speaker recognition techniques for controlling access of a speaker to the service or facility from among a multiplicity of speaker candidates (more than one reference identifier), including ‘receiving first spoken utterances (the user speech input)’, ‘generating a sub-list of speaker of candidates’, ‘activating databases’ containing ‘information respectively attributable to the speaker candidates’ in ‘the sub-list’ (data elements), ‘querying (presenting as prompt to) the

Art Unit: 2626

speaker (the user) with at least one question that is relevant to the information in the databases of remaining speaker candidates', providing 'the accuracy of the spoken answer (second user input) by the speaker in response to the at least one question', 'further performing (processing) the voice classification analysis (identify a desired selection identifier) on the voice characteristics from the answer ' (second user input) (col. 3, line 12 to col. 4, line 25), 'information contained in a user databases' exhibiting 'static features/information' and/or 'dynamic features/information' for a 'dialog' so that the invention 'can dynamically create new questions (dynamic grammar), understand the respective answers and then use the information during next transaction' (col. 10, lines 18-52) (also see col. 15, line 34 to col. 16, line 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the explicit teachings regarding building dynamic grammar for name candidates disclosed by GALLER with the explicit teachings regarding providing/querying more user information in database associated a sub-list of candidates (matching reference identifiers) and processing (creating/performing) new questions/answers (such as second user input) in spoken/voice dialog manner with speech/speaker recognition, taught by KANEVSKY, for the purpose (motivation) of providing secure access to serves and/or facilities (KANEVSKY: abstract and col. 3, 13-14).

As per **claims 40-41** (depending on claim 12), the rejection is based on the same reason described for claims 38-39, because the claims recite the same or similar limitations as claims 38-39 respectively.

As per **claims 42-43** (depending on claim 32), the rejection is based on the same reason described for claims 38-39, because the claims recite the same or similar limitations as claims 38-39 respectively.

Art Unit: 2626

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Please address mail to be delivered by the United States Postal Service (USPS) as follows:

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Effective January 14, 2005, except correspondence for Maintenance Fee payments, Deposit Account Replenishments (see 1.25(c)(4)), and Licensing and Review (see 37 CFR 5.1(c) and 5.2(c)), please address correspondence to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolator, etc.) as follows:

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Art Unit: 2626

Alexandria , VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QI HAN whose telephone number is (571)272-7604. The examiner can normally be reached on M-TH:9:00-19:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QH/qh

December 3, 2009

/QI HAN/

Primary Examiner, Art Unit 2626